## **ERIC THOMAS BRADLOW**

## Work Address

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HARVARD UNIVERSITY Cambridge, MA Education Ph.D. in Statistics, November 1994 Cognate: Statistical Applications in Business and Marketing Research Thesis topic: Analysis of Ordinal Survey Data with No Answer Responses Advisor: Professor Alan M. Zaslavsky HARVARD UNIVERSITY Cambridge, MA A.M. in Statistics, March 1990 THE WHARTON SCHOOL, UNIV. of PENN Philadelphia, PA Bachelor of Science in Economics, May 1988 - Major in Statistics THE WHARTON SCHOOL, UNIV. of PENN Philadelphia, PA **Employment** • Chairperson, Wharton Marketing Department, 2014-• K.P. Chao Professor, Professor of Marketing, Statistics, Education and Economics (tenured), July 2015-• Vice-Dean, Analytics at Wharton, 2019-• Vice-Dean and Director, Wharton Doctoral Programs, July 2009-2016 • K.P. Chao Professor, Professor of Marketing, Statistics, and Education (tenured), July 2006-2015 • K.P. Chao Professor, Professor of Marketing and Statistics (tenured), July 2005-June 2006. • Associate Professor of Marketing and Statistics (tenured), July 2000-June 2005 • Assistant Professor of Marketing and Statistics, July 1996 -June 2000 • Lecturer, Statistics Department, January 1995 – May 1996 • Academic Director, Wharton Small Business Dev. Center, March 2002-June 2008 • Wharton Risk Center Fellow, February 2007-• Senior Fellow, Leonard Davis Institute of Health Economics, 2007-• Co-Director, Wharton Interactive Media Initiative, March 2008-December 2010 • Faculty Director, Wharton Customer Analytics Initiative,

**Home Address** 

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|                       | <ul> <li>January 2011-</li> <li>University of Pennsylvania Fellow, 2009-2011</li> <li>Fellow, Warren Center in Network and Data Sciences, Penn<br/>School of Engineering, 2013-</li> </ul>   |                |
|-----------------------|--|----------------|
| Research<br>Interests | <ul> <li>Probability models for Marketing data</li> <li>Applied Bayesian modeling</li> <li>Missing data problems</li> <li>Choice modeling</li> <li>Statistical models for unique data structures</li> </ul>  |                |
| Work<br>Experience    | <ul> <li>GBH INSIGHTS, LLC</li> <li>December 2015-</li> <li>Co-Founder and Chief Research Officer</li> <li>Business Intelligence</li> <li>Marketing Research</li> <li>Custom Analytics</li> </ul>  | New York, NY   |
|                       | <ul> <li>EDUCATIONAL TESTING SERVICE</li> <li>Associate Research Scientist, September 1994 - June 1996</li> <li>Statistics and Psychometric Research Division</li> <li>Bayesian Item Response Models</li> <li>Testlet Models</li> <li>Computerized Adaptive Testing</li> </ul>   |                |
|                       | <ul> <li>E.I. DuPONT de NEMOURS &amp; CO.<br/>May 1991 - August 1994</li> <li>Statistician and Doctoral Research Fellow, Corporate<br/>Marketing and Business Research Division. Full time May<br/>1991 - September 1992 while living in Wilmington. Part<br/>time Consultant September 1992 - August 1994</li> <li>Analysis of Categorical Survey Data (Multivariate<br/>Analysis, Logistic Regression, OLS Regression, Factor<br/>Analysis, Bayesian Modeling, etc.)</li> <li>Experimental Design</li> <li>Consultant to Corporate Management</li> <li>Developed corporate metrics</li> <li>Implemented a new "one page trade off" grid<br/>technique</li> </ul> | Wilmington, DE |
|                       | RENT BUREAU, LLC<br>June 2007-<br>Statistician, Research Fellow, and Equity Partner<br>• Address the predictive nature of monthly rental<br>data on future rental behavior.  | Atlanta, GA    |

|        | Business Strategy and Consulting   |                  |
|--------|--|------------------|
|        | <ul> <li>INVITE MEDIA, INC [Sold to Google]</li> <li>August 2007- June 2010</li> <li>Chief Scientist <ul> <li>Responsible for all statistical projects</li> <li>Targeted banner advertising using click-through and social network data.</li> <li>Business Strategy and Consulting</li> </ul> </li> </ul>  | Philadelphia, PA |
|        | <ul> <li>OFFICE ARROW, INC.</li> <li>July 2008-July 2011</li> <li>Statistical and Business Consultant</li> <li>Responsible for improving business model for social networking website</li> </ul>   | Atlanta, GA      |
|        | STRATEGIC DATA CORPORATION         September 1999-September 2001         [Sold to Fox Media Interactive]         Chief Scientist         • Development of targeted banner advertising engine         Statistical Consulting         Board Memberships         • Wanderfly.com         • FABeetle.com   | Santa Monica, CA |
|        | <ul> <li>Clean Slate, Inc.</li> <li>NOMI, INC.</li> <li>Academic Advisor and Statistical Consultant on<br/>Path Modeling</li> </ul>  |                  |
| Awards | <ul> <li>4 time winner (1988-1991), Harvard University Derek Bok Center for excellence in teaching</li> <li>E.I. DuPont de Nemours and Company young researcher award, Corporate Marketing Division, 1992</li> <li>Appointed Research Consultant, AT&amp;T Bell Laboratories, 1997</li> <li>Finalist 1997 American Statistical Association Savage Award Dissertation Prize</li> <li>1998, 1999, 2001, 2012, 2013 Wharton MBA Core Curriculum Teaching Award</li> <li>1999, 2000, 2001, 2002, 2007, 2008 Miller-Sherrerd MBA Core Teaching Award</li> </ul> |                  |

|              | <ul> <li>Invited Speaker and Spokesperson for μαθ, national mathematics high<br/>school honor society, 2001</li> </ul>                           |
|--------------|--|
|              | <ul> <li>2001-2002, 2004-2005, 2006-2007, 2010-2011, 2013-2014 Helen Kardon<br/>Moss Anvil Award Finalist</li> </ul>                             |
|              | <ul> <li>2003, 2004, 2005, 2006, 2013, 2014, 2015, 2016 Wharton School, MBA</li> </ul>   |
|              | • 2005, 2004, 2005, 2006, 2015, 2014, 2015, 2016 Whatton School, MBA<br>Excellence in Teaching Award   |
|              | <ul> <li>2003 AERA Outstanding Reviewer</li> </ul>   |
|              | <ul> <li>2003 AERA Outstanding Reviewer</li> <li>2003 Wharton West WEMBA Teaching Award</li> </ul>   |
|              | <ul> <li>2005 Whatton West WEMBA reaching Award</li> <li>2004 Whatton School, Undergraduate Excellence in Teaching Award</li> </ul>              |
|              | • Finalist, Paul E. Green Award for the best paper in Journal of Marketing   |
|              | Research, 2004.  |
|              | • Appointed Fellow of the American Statistical Association, 2005   |
|              | • 2006, 2007, 2008 Wharton East WEMBA Teaching Award   |
|              | • 2006, 2007, 2008, 2011, 2012, 2014, 2015, 2018 "Goes Above and Beyond the Call of Duty" Wharton MBA Teaching Award                             |
|              | • 2006 NCME Technical or Scientific Contribution to the Field of   |
|              | Educational Measurement: Development of Testlet Response Theory  |
|              | • 2006, 2007 Outstanding Reviewer Journal of Educational and Behavioral Statistics.  |
|              | • Winner of the 2006 Research Committee of the Society of General Internal Medicine Best Paper Award.  |
|              | • Winner, American Marketing Association, EXPLOR Award (2007)  |
|              | • Finalist, John D.C. Little Award (2008) for best paper in <i>Marketing Science</i> or <i>Management Science</i>                                |
|              | <ul> <li>Appointed Fellow of the American Education Research Association,<br/>(2009).</li> </ul>   |
|              | <ul> <li>Appointed Inaugural Fellow of the University of Pennsylvania, (2009)</li> </ul>   |
|              | • Finalist, H. Paul Root Award (2009), Best Paper in Journal of Marketing.   |
|              | Named Top-5 Business School Professor, <i>Financial Times</i> (2010)     Einclist Paul E. Chaop Award for the best paper in Journal of Marketing |
|              | • Finalist, Paul E. Green Award for the best paper in Journal of Marketing Research, 2011, 2015.   |
|              | • Finalist, Steenkamp Award for Long-Term Impact, International Journal of Research in Marketing, 2015.  |
|              | • Winner, Helen Kardon Moss Anvil Award for MBA teaching.  |
|              | • Winner, Donald Lehmann Award for Best Dissertation Paper Journal of  |
|              | Marketing or Journal of Marketing Research (2016)  |
|              | • Winner, IJRM (2016) Jan-Benedict Steenkamp Paper Award for Long-term Impact  |
|              | • Winner John D.C. Little Award, Best Paper, <i>Marketing Science</i> , (2017)   |
|              | • Finalist, Davidson Award, Best Paper, <i>Journal of Retailing</i> (2018)   |
| Professional | Board Member, American Marketing Association, 2013-2016.   |
| Associations | • Co-Editor, Replication Corner, Marketing Letters, 2012-  |
|              | • Area Editor, Journal of Marketing Research, 2012-  |
|              | • Area Editor, <i>Journal of the American Statistical Association</i> , Theory and Methods, 2011-  |
|              |  |

|                             | Editor-in-Chief: <i>Marketing Science</i> , 2008-2010  |
|-----------------------------|--|
|                             | • Area Editor: Marketing Science, 2006-2007.   |
|                             | • Associate Editor: <i>Psychometrika</i> , 2002-2007.  |
|                             | • Senior Associate Editor: <i>Journal of Educational and Behavioral Statistics</i> , 2002-2007.  |
|                             | <ul> <li>Associate Editor: Journal of Educational and Behavioral Statistics, 2002-2007.</li> <li>Associate Editor: Payorian Analysis, 2004</li> </ul>  |
|                             | <ul> <li>Associate Editor: <i>Bayesian Analysis</i>, 2004-</li> <li>Editorial Board: <i>International Journal of Research in Marketing</i>, 2007-</li> </ul>   |
|                             | <ul> <li>Chair, William O'Dell Award Committee, <i>Journal of Marketing Research</i></li> <li>Co-Editor, Replications Corner, <i>IJRM</i>, 2013-</li> </ul>  |
|                             | Editorial Board: <i>Marketing Science</i> , 2001-2007  |
|                             | Editorial Board: Journal of Marketing Research, 2004-  |
|                             | Editorial Board: Journal of Consumer Research, 2007-   |
|                             | Editorial Board: <i>Quantitative Marketing and Economics</i> , 2003-   |
|                             | Editorial Board: <i>Quantum ve marketing und Economics</i> , 2005-     Editorial Board: <i>Marketing Letters</i> , 1999-   |
|                             | Editorial Board: <i>Quarterly Journal of Electronic Commerce</i> , 2000- 2007  |
|                             | Editorial Board: <i>Journal of Marketing</i> , 2008-   |
|                             | <ul> <li>Associate Editor: Journal of Computational and Graphical Statistics, 1997-2003</li> </ul>   |
|                             | <ul> <li>Associate Editor: Special Issue of Management Science, 2003</li> </ul>  |
|                             | <ul> <li>Program Committee Chair: Princeton-Trenton Chapter ASA, 1995-1996</li> </ul>  |
|                             | Chance Task Force : American Statistical Association, 2001-2002  |
|                             | Treasurer, INFORMS Society on Marketing Science, 2005-   |
|                             | Management Committee: Journal of Educational and Behavioral Statistics, 2003-  |
|                             | 2006.  |
|                             | <ul> <li>Section on Statistics in Marketing, American Statistical Association, Chair 2002,<br/>Council of Representatives 2005.</li> </ul>   |
|                             | • Appointed National Academy of Sciences Panel Member, Food Insecurity Task Force, 2004-2005.  |
|                             | • Appointed National Academy of Sciences Panel Member, Census Program of Evaluations and Experiments, 2007-2008.   |
|                             | • Reviewer: Journal of the American Statistical Association, Psychometrika,<br>Statistica Sinica, Marketing Science, Statistical Science, Journal of Educational<br>Measurement, Marketing Letters, Journal of Marketing Research, Statistics in<br>Medicine, The American Statistician, Management Science, Journal of Business<br>and Economic Statistics, Journal of Educational and Behavioral Statistics,<br>Journal of Computational and Graphical Statistics, Journal of Consumer<br>Research, Applied Psychological Measurement, Quantitative Marketing and<br>Economics, Chance |
| Publications in<br>Refereed | 1) Doksum, K., Blyth, S., Bradlow, E.T., Meng, X-L., Zhao, H. (1994)<br>"Correlation Curves as Local Measures of Variance Explained by Regression,"<br><i>Journal of the American Statistical Association</i> , Vol. 89, 426, 571, 572   |
| Journals                    | <ul> <li>Journal of the American Statistical Association, Vol. 89, 426, 571-572</li> <li>Bradlow, E.T. (1996), "Negative Information and the Three-Parameter Logistic Model," Journal of Educational and Behavioral Statistics, Summer, Vol. 21, Number 2, 179-185.</li> </ul>   |
|                             | <ul> <li>3) Bradlow, E.T. (1997), "A Note on Multivariable Testing in Marketing Research or Forbes, Free Popcorn, and Experimental Design," <i>CHANCE</i>, Vol. 10(2), Summer, 11-13.</li> </ul>   |
|                             | <ul> <li>4) Bradlow, E.T. and Zaslavsky, A. M. (1997), "Case Influence Analysis in</li> </ul>  |

| Г   |  |
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|     | Bayesian Inference," Journal of Computational and Graphical Statistics,  |
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| 5)  | Junker, B.W. and Bradlow, E.T. (1997), Discussion of Val Johnson's   |
|     | "Alternatives to GPA-based Evaluation of Student Performance," Statistical   |
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| 6)  | Bradlow, E.T. and Wainer, H. (1998), "Publication Delays in Statistics   |
|     | Journals," CHANCE, 11(1), 42-45, Lead article.   |
| 7)  | Wainer, H., Palmer, S. J., and Bradlow, E.T. (1998), "A Selection of Selection Anomalies," <i>CHANCE</i> , 11(2), 3-7. |
| 8)  | Bradlow, E.T. and Wainer, H. (1998), "Some Statistical and Logical   |
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| 9)  | Bradlow, E.T. and Thomas, N. (1998), "Item Response Theory Models Applied  |
| "   | to Data Allowing Examinee Choice," Journal of Educational and Behavioral   |
|     | Statistics, Fall, Vol. 23, No. 3, 236-243.   |
| 10) | Bradlow, E.T., Weiss, R.E., and Cho, M. (1998), "Bayesian Identification of  |
|     | Outliers in Computerized Adaptive Tests," <i>Journal of the American Statistical</i>                                   |
|     | Association, September, Vol. 93, No. 443, 910-919.   |
| 11) | Bradlow, E.T. (1998), "Encouragement Designs: An approach to self-selected   |
| ,   | samples in an experimental design," Marketing Letters, 9:4, 383-391.   |
| 12) | Bradlow, E.T. and Zaslavsky, A. M. (1999), "A Hierarchical Latent Variable   |
|     | Model for Ordinal Data From a Customer Satisfaction Survey with 'No  |
|     | Answer' Responses," Journal of the American Statistical Association, March,  |
|     | Vol. 94, No. 445, 43-52.   |
| 13) | Bradlow, E.T., Wainer, H., and Wang, X. (1999), "A Bayesian Random Effects   |
|     | Model for Testlets," Psychometrika, 64, 153-168.   |
| 14) | West, P.M., Ariely, D., Bellman, S., Bradlow, E.T., Huber, J., Johnson, E.,  |
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| 15) | Hoch, S.J., Bradlow, E.T., and Wansink, B. (1999), "The Variety of An  |
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| 16) | Montgomery, A.L. and Bradlow, E.T. (1999), "Why Analyst Overconfidence   |
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|     | Marketing Science, Volume 18, Number 4, 569-583.   |
| 17) | Bradlow, E.T. and Schmittlein, D.C. (1999), "The Little Engines That Could:  |
|     | Modeling the Performance of World Wide Web Search Engines," Marketing  |
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| 20) | Bradlow, E.T. and Weiss, R.E., (2001), "Outlier Measures and Norming   |
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| 21) | Bradlow, E.T. and Fader, P.S. (2001), "A Bayesian Lifetime Model for the 'Hot  |
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| 23) | Bradlow, E.T., Hardie, B.G.S., and Fader, P.S. (2002), "Bayesian Inference for   |
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| 23) | the Negative Binomial Distribution Via Polynomial Expansions," <i>Journal of</i>   |
|     | Computational and Graphical Statistics, Vol. 11, Number 1, 189-201.  |
| 24) |  |
| 24) | Wang, X., Bradlow, E.T., and Wainer, H. (2002), "A General Bayesian Model  |
|     | for Testlets: Theory and Applications," <i>Applied Psychological Measurement</i> , 26 (1) 1000-128. Also lists have ETS ODE Technical Paraet 28-01 |
|     | (1), 1090-128. Also listed as ETS GRE Technical Report 98-01.  |
| 25) | Everson, P.J. and Bradlow, E.T. (2002), "Bayesian Inference for the Beta-  |
|     | Binomial Distribution via Polynomial Expansions," Journal of Computational   |
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| 26) | Hoch, S.J., Bradlow, E.T., and Wansink, B. (2002), "Rejoinder to 'The Variety  |
|     | of An Assortment: An Extension to the Attribute-Based Approach'," Marketing  |
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| 27) | Bradlow, E.T. (2002), "Exploring Repeated Measures Data Sets for Key   |
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| 28) | Bradlow, E.T., Hoch, S., and Hutchinson, W. (2002), "An Assessment of Basic  |
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|     | Calibration, Antecedents, and Consequences," Journal of Educational and  |
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| 29) | Marshall, P. and Bradlow, E.T. (2002), "A Unified Approach to Conjoint   |
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|     | Number 459, 674-682.   |
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|     | Stay, and Prolonged Stay in Pediatric Asthma," Health Services Research,   |
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|     | Class Absence: Missing Students and Missing Data," Journal of Educational  |
|     | and Behavioral Statistics, 28(3).  |
| 32) | Bradlow, E.T., Hu, Y., and Ho, T-H. (2004), "A Learning-based Model for  |
|     | Imputing Missing Levels in Partial Conjoint Profiles," Journal of Marketing  |
|     | Research, Lead Article and discussion paper, Vol. XLI (November), 369-381.   |
|     | Finalist, Paul E. Green Award, best paper in Journal of Marketing  |
|     | Research.  |
| 33) | Bradlow, E.T., Hu, Y. and Ho, T.H. (2004), "Modeling Behavioral Regularities   |
|     | of Consumer Learning in Conjoint Analysis," Journal of Marketing Research,   |
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| 34) | Wainer, H., Wang, X., Skorupski, W. P., and Bradlow, E.T. (2005), "A   |
|     | Bayesian Advantage in Evaluating Passing Scores: The PPoP Curve," Journal  |
|     | of Educational Measurement, Fall, Vol 42, No 3, 271-282.   |
| 35) | Park, Y.H. and Bradlow, E.T. (2005), "An Integrated Model for Bidding  |
|     | Behavior in Internet Auctions: Whether, Who, When, and How Much," Journal  |
|     | of Marketing Research, Vol. XLII (November 2005), 470-482.   |
|     | An article in the NY Daily News based on this paper appeared February 21st,  |
|     | 2006.  |
| 36) | Bradlow, E.T. (2005), "Current Issues and a Wish-List for Conjoint Analysis,"  |
|     | Applied Stochastic Models in Business and Industry, with discussion and  |
|     | rejoinder, Vol. 21, No 4-5, 319-323, 331-332.  |
| 37) |  |
|     | Store Supermarket Shopping Paths," International Journal of Research in  |
|     | Marketing, Vol. 22, No. 4, 395-414. Winner, Steenkamp Award for  |
|     | Long-Term Impact.  |

| 38) | Bradlow, E.T., Bronnenberg, B., Russell, G.J., Arora, N., Bell, D.R., Deepak, S.D., ter Hoefstede, F., Sismeiro, C., Thomadsen, R., and Yang, S. (2005), "Spatial Models in Marketing", <i>Marketing Letters</i> , Volume 16, Numbers 3-4, 267-278. |
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| 39) | Zanutto, E. and Bradlow, E.T. (2006), "The Perils of Data Pruning in Consumer   |
| 37) | Choice Models," Quantitative Marketing and Economics, September, Vol. 4,  |
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| 40) | Schweidel, D.A., Bradlow, E.T., and Williams, P. (2006), "A Feature-Based<br>Approach to Assessing Advertisement Similarity," <i>Journal of Marketing</i><br><i>Research</i> , Vol. 43, Issue 2, 237-243.   |
| 41) | Musalem, A., Bradlow, E.T. and Raju, J. (2006), "Bayesian Estimation of<br>Random-Coefficients Choice Models using Aggregate Data," <i>Journal of</i><br><i>Applied Econometrics</i> , to appear.   |
| 42) | Braun, M., Fader, P.S., Bradlow, E.T., and Kunreuther, H. (2006),   |
| (2) | "Modeling the 'Pseudodeductible' in Insurance Claims Decisions,"  |
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|     | INFORMS Decision Analysis Society (DAS) student paper competition.  |
| 43) | Miller, S.J., Bradlow, E.T., and Dayartna, K. (2006) "Closed-Form Bayesian  |
|     | Inferences for the Logit Model via Polynomial Expansions", Quantitative   |
|     | Marketing and Economics, Vol 4. No 2, 173-206.  |
| 44) | Schweitzer, M., Hershey, J., and Bradlow, E.T. (2006), "Promises and Lies:  |
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|     | Processes, Issue 1, September, Pages 1-19, Lead Article.  |
| 45) | Werner, Rachel M. and Eric T. Bradlow (2006). "Relationship between   |
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|     | rates." Journal of the American Medical Association, 296(22): 2694-   |
|     | 2702 with discussion. Winner of the 2006 Research Committee of the  |
|     | Society of General Internal Medicine Best Paper Award. Response   |
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| 46) | Burns, L.R., Lee, J.A., Bradlow, E.T., and Antonacci, A.C. (2007), "Surgeon   |
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| 47) | Bradlow, E.T. and Park, Y-H. (2007), "Bayesian Estimation of Bid Sequences  |
|     | in Internet Auctions Using a Generalized Record Breaking Model," Marketing  |
|     | Science, Mar/Apr; 26(2): 218 – 229. Finalist, John D.C. Little Award  |
|     | (2008) for best paper in <i>Marketing Science</i> or <i>Management Science</i> .  |
| 48) | Burns, L.R., Lee, J.A., Bradlow, E.T., and Antonacci, A.C. (2007),  |
|     | "Assessment of Medical Devices: How to Conduct Comparative Technology   |
|     | Evaluations of Product Performance", <i>International Journal of Technology</i><br>Assessment in Health Care, 23(4):455-63.   |
| 49) | Schweidel, D.A., Fader, P.S, Bradlow, E.T. (2008), "Modeling Retention  |
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|     | delights. Journal of Educational and Behavioral Statistics, 33, 363-384.  |
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|              | Science, Vol. 27, No. 5, September–October 2008, pp. 829–843.   |
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| 53)          | Werner, R.M., Bradlow, E.T., and Asch, D. A. (2008), "Evaluating the  |
|              | role of performance measures in quality improvement: Do process   |
|              | measures capture unmeasured quality information?", Health Services  |
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|              | Estimating Consumer Preferences and Coupon Usage from Aggregate   |
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| <u> </u>     | Naik, P., Wedel, M., Bacon, L., Bodapati, A., Bradlow, E.T., Kamakura,  |
|              | W., Kruelen, J., Lenk, P., Montgomery, Madigan, D., A.M. (2008),  |
|              | "Challenges and Opportunities in High Dimensional Choice Data   |
| 5()          | Analyses", Marketing Letters, December, 3-4, 201-213.   |
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|                       | <ul> <li>Li, Hui, Economics Department, University of Pennsylvania (2015)</li> <li>Wei, Max, Economics Department, University of Pennsylvania (2015)</li> <li>Li, Kathleen, Marketing Department, The Wharton School (2018)</li> <li>Sunada, Takeaki, Economics Department, University of Pennsylvania (2019)</li> <li>Pan, Qi, Economics Department, University of Pennsylvania (2019)</li> <li>Li, Minshen, Economics Department, University of Pennsylvania (2019)</li> <li>Fan, Jeremy, Marketing Department, University of Pennsylvania (2020)</li> </ul>  |
|-----------------------|---|
| University<br>Service | <ul> <li>Participant, Faculty International Seminar in Korea, 1997</li> <li>Wharton MBA Curriculum Committee, 1997</li> <li>Moderator, Marketing Panel, Wharton Women in Business, October 1997 and October 1998</li> <li>Faculty Advisor, American Marketing Association, Wharton School 1996-1997</li> <li>MBA Advisor, Wharton Marketing Department, 1998.</li> <li>Doctoral Committee Marketing Department 1997.</li> <li>Computer Committee, Marketing Department 1997, 1998, 1999, 2000, 2007, 2008</li> <li>Chair Computer Committee, Marketing Department 2003-2004, 2007-</li> <li>Faculty Recruiting Committee, Marketing Department 2003-2004, 2007, 2008</li> <li>Chair, Faculty Recruiting Committee, Marketing Department 2001, 2004</li> <li>Chair, Faculty Recruiting Committee, Marketing Department 2001, 2004</li> <li>Chair, Senate Committee on the Economic Status of the Faculty 2001-2003</li> <li>Co-Course Head for MGMT 653, Field Application Project course</li> <li>Senate Committee on the Economic Status of the Faculty 2001-2004</li> <li>University Council Committee on Personal Benefits, 2002-2003, 2007-2008.</li> <li>University (Provost) Committee on Retirement Benefits, 2004</li> <li>Academic Director, Wharton Small Business Development Center, 2002-2008</li> <li>Wharton School Undergraduate Research Fellows Program, Advisor 2004.</li> <li>MBA Cohort Mentor, 2003-2006.</li> <li>Dean's Taskforce on the Undergraduate Curriculum, 2003-2004.</li> <li>2005-2009 Wharton Committee on Academic Freedom and Responsibility</li> <li>2005-2009 University of Pennsylvania, Faculty Senate</li> <li>2007-2009 University of Pennsylvania, Faculty Senate</li> <li>2007 Weiss Center Quinquennial Review Committee</li> <li>2008, University of Pennsylvania, Faculty Senate&lt;</li></ul> |
|                       | Endowment Committee   |

|                               | <ul> <li>2012-2013, University Council Committee on Personnel Benefits</li> <li>Wharton Dean's Advisory Council, 2014-</li> </ul>   |
|-------------------------------|---|
| Wharton<br>Teaching<br>Record | <ul> <li>Statistics 101 (introductory statistics), as Visiting Lecturer, September 1994</li> <li>Statistics 111 (introductory statistics) as Visiting Lecturer, September 1995</li> <li>Marketing 212 (marketing research), Fall 1996, Spring 2003</li> <li>Marketing 612 (2013-2019) – Marketing Core Strategy</li> <li>Marketing 613 (2013) – Marketing Core Simulation</li> <li>Marketing 621 (marketing essentials), Fall 2006, Fall 2007, WEMBA Spring 2008</li> <li>Marketing 622 (marketing management), Core Class (3 Sections), Spring 1998, Spring 1999, Spring 2000, Spring 2001, Spring 2005, Spring 2006, Spring 2007, WEMBA 2005, WEMBA 2006, WEMBA 2007, Spring 2011.</li> <li>Marketing 756 (marketing research), Fall 1996, Fall 1998, Spring 2003 (WOMBA and WEMBA WEST), Fall 2003 (WEMBA WEST), Spring 2004, Summer 2004 (WEMBA WEST), Spring 2005</li> <li>Statistics 500 (Regression and ANOVA), Fall 2000</li> <li>Management 653 (Field Application Project), 2000-2001</li> <li>Marketing 966 (PhD Data Analysis), Spring 1999-2007</li> </ul> |
| Papers<br>Presented           | "Hierarchical Models for Customer Satisfaction Questionnaire Data," Contributed<br>Paper presented August 1993 at the Joint Statistical Meetings, San Francisco, CA<br>"A Bayesian Model for Ordinal Survey Responses," Invited Talk presented January  |
|                               | <ul><li>1994 at Dept. of Biostatistics, Harvard University</li><li>"Case Influence Analysis in Bayesian Inference," Invited Talk presented April 1995 at Dept. of Statistics, The Pennsylvania State University</li></ul>   |
|                               | "Analysis of Ordinal Survey Data with 'No Answer' Responses," Invited Talk<br>presented June 1995 at Interface95 conference, Pittsburgh PA  |
|                               | "Negative Information and the Three-Parameter Logistic Model," Contributed Paper<br>presented August1995 at the Joint Statistical Meetings, Orlando, FL   |
|                               | "Case Influence Analysis in Bayesian Inference," Invited Talk presented July 1996,<br>SISC - Interface96, Sydney, Australia   |
|                               | "Error Rates Due to Rescoring Tests," August 1996, Joint Statistical Meetings,<br>Chicago, IL   |
|                               | "Item Response Theory Models Applied to Data Allowing Examinee Choice," Invited<br>Talk presented March 1997, Duke University, Department of Statistics   |
|                               | "Analysis of Ordinal Survey Data," Invited Talk presented at the Ohio State<br>University, May 1997   |
|                               | "Posterior Predictive Outlier Detection Using Sample Reweighting," Invited Talk,<br>INFORMS meeting, Dallas, Texas, October 1997  |
|                               | "The Variety of an Assortment," Invited Talk, Cornell University, Marketing   |

| Department, December 1997   |
|---|
| "The Variety of an Assortment," Invited Talk, University of Chicago, Marketing Department, January 1998   |
| "A Hierarchical Latent Variable Model for Ordinal Customer Satisfaction Data with<br>No Answer Responses," Invited Talk, Temple University, Marketing and Statistics<br>Department, February 1998   |
| "The Variety of an Assortment," Invited Talk, UCLA, Marketing Department, March 1998  |
| "A Hierarchical Bayes Model for Bundle Choices of a Fixed Size," Marketing Science<br>Conference, INSEAD, Fontainebleau, France, July 1998  |
| "The Little Engines that Could: Modeling the Performance of World Wide Web<br>Search Engines," Joint Statistical Meetings, Dallas, August 1998  |
| "The Little Engines that Could: Modeling the Performance of World Wide Web<br>Search Engines," The Wharton School Statistics Department, March 1999   |
| "The Little Engines that Could: Modeling the Performance of World Wide Web<br>Search Engines," Marketing Science Conference, Syracuse, NY, May 1999   |
| "A Bayesian Random Effects Model for Testlets," Invited Talk, European Meeting of<br>the Psychometric Society, Lueneberg, Germany, July 1999  |
| "The Little Engines that Could: Modeling the Performance of World Wide Web<br>Search Engines," The Pennsylvania State University, Marketing Department E-<br>commerce Speaker Series, February 2000 |
| "Closed-Form Bayesian Inference for the Negative Binomial Distribution," The Wharton School Statistics Department, April 2000   |
| "A Bayesian Lifetime Model for the Hot 100 Billboard Songs," The University of Houston, July 2000   |
| "Launching New-Nondurables in Japan: Marketing Practices and Marketing<br>Consequences," Joint Statistical Meetings, Atlanta GA, August 2001  |
| "A Pattern Reinforcement Model for Partial Profile Conjoint," University of Michigan<br>Business School, January 2002   |
| "A Pattern Reinforcement Model for Partial Profile Conjoint," University of California, Berkeley, Marketing Department, May 2002  |
| "A Pattern Reinforcement Model for Partial Profile Conjoint," Columbia University Department of Statistics, November 2002   |
| "An Integrated Model for Who, When, and How Much in Internet Auctions," MIT Ph.D. Camp, September 2003  |
|   |

| "An Integrated Model for Who, When, and How Much in Internet Auctions," Yale<br>University, Marketing Department, September 2003  |
|---|
| "Spatial Statistics in Marketing": 6 <sup>th</sup> Invitation Choice Conference, University of Colorado at Boulder, June 2004   |
| "Bayesian Estimation of Random Coefficients Choice Models Using Aggregate Data",<br>Tilburg Marketing Camp, December 2004.  |
| "Who's got the coupon? Estimating Consumer Preferences and Coupon Usage from<br>Aggregate Information", Olin School of Business, Washington University in St. Louis,<br>April 2005. |
| "Bayesian Estimation of Random Coefficients Choice Models Using Aggregate Data",<br>Harvard Business School, May 2005.  |
| "Bayesian Estimation of Random Coefficients Choice Models Using Aggregate Data",<br>Bayes Econometric Conference at Washington University, August 2005.                             |
| "Modeling the Acquisition and Retention of Services at a Multi-Service Provider",<br>Joint Statistics Meetings, Minneapolis, MN, August 2005.                                       |
| "Bayesian Estimation of Bid Sequences in Internet Auctions Using a Generalized Record Breaking Model", NYU Statistics Department, March 2006.                                       |
| "Bayesian Estimation of Bid Sequences in Internet Auctions Using a Generalized Record Breaking Model", Stanford University, April 2006.   |
| "Bayesian Estimation of Bid Sequences in Internet Auctions Using a Generalized<br>Record Breaking Model", Northwestern University, September 2006.                                  |
| "Analysis of Path Data in Marketing with Applications to Grocery Shopping",<br>University of Maryland, May 2007.  |
| "Analysis of Path Data in Marketing with Applications to Grocery Shopping",<br>Wharton Alumni Forum, Hong Kong, May 2007.   |
| "Wharton SBDC in Action", Zhejiang University, Hangzhou, China, May 2007.   |
| "Bayesian Estimation of IDS and Stochastic Prisoner's Dilemma Games", QME Conference, Chicago, IL, September 2007.  |
| "Bayesian Estimation of IDS and Stochastic Prisoner's Dilemma Games", University of Houston, Houston, TX, November 2007.  |
| "Bayesian Estimation of IDS and Stochastic Prisoner's Dilemma Games", Emory University, Atlanta, GA, December 2007.   |
| "Bayesian Estimation of IDS and Stochastic Prisoner's Dilemma Games", University of Southern California, Los Angeles, CA, March 2008.   |
| "Future and Current Directions for Marketing Science", Haring Symposium Keynote   |

|                       | Address, University of Indiana, Bloomington, IN, April 2008.   |
|-----------------------|--|
|                       | "Bayesian Estimation of IDS and Stochastic Prisoner's Dilemma Games", Columbia<br>University Marketing Camp, May 2008.               |
|                       | "Bayesian Structural Estimation of Retail Demand Under Partially Observed Out-of-<br>Stocks", Emory University, September 2008.      |
|                       | "Bayesian Structural Estimation of Retail Demand Under Partially Observed Out-of-<br>Stocks", University of Rochester, October 2008. |
|                       | "Bayesian Structural Estimation of Retail Demand Under Partially Observed Out-of-<br>Stocks", University of Miami, December 2008.    |
|                       | "Bayesian Structural Estimation of Retail Demand Under Partially Observed Out-of-<br>Stocks", USC, January 2009.                     |
|                       | "Bayesian Structural Estimation of Retail Demand Under Partially Observed Out-of-<br>Stocks", University of Wisconsin, January 2009. |
|                       | "Multichannel Forecasting of Media Usage", Johns Hopkins University, September 2010.   |
|                       | "Clumpiness Measures and Their Applications in Marketing", Harvard University,<br>May 2012   |
|                       | "Clumpiness Measures and Their Applications in Marketing", Harvard University,<br>October 2012                                       |
|                       | "From RFM to RFMC: Clumpiness Measures and Their Applications in Marketing", USC, March 2013   |
|                       | "From RFM to RFMC: Clumpiness Measures and Their Applications in Marketing",<br>Dartmouth Inaugural Marketing Camp, May 2013.        |
|                       | "From RFM to RFMC: Clumpiness Measures and Their Applications in Marketing",<br>Temple, September 2014.                              |
|                       | "Bayesian Imputation for CRM Data with Anonymous Visits", Kellogg School of Management, May 2016.                                    |
|                       | "Selecting the Correct Data Granularity", Stanford University, April 2019.   |
|                       | "Selecting Data Granularity Using the Power Likelihood", USC, September 2019.  |
| Executive             | Data Mining Seminar, December 1999 "Case Discussion Leader"  |
| Education<br>Teaching | DuPont Customized Program, January and February 2000, "Marketing Strategy"   |
|                       | Essentials of Marketing Program 2003-2005  |
|                       |  |

|                        | Marketing in the Financial Services Industry 2003-2008  |   |
|------------------------|---|---|
|                        | Morgan Stanley Financial Services Program 2003-2007   |   |
|                        | Management Engineers, 2005  |   |
|                        | Wharton-NFL Program   |   |
|                        | Academic Director, Wharton Philip-Morris Program, 2004-200  | 98  |
|                        | Academic Director and Founder, Google Program 2010-   |   |
| Additional             | HARVARD UNIVERSITY  | Cambridge, MA                                 |
| Teaching<br>Experience | Introduction to Quantitative Methods<br>September 1988 - August 1990 and September 1992 - January<br>Teaching Fellow.<br>Quantitative Reasoning A (QRA)   | 1994  |
|                        | September 1990 – September 1991: Teaching Fellow:   |   |
|                        | NORTHEASTERN UNIVERSITY   | Boston. MA                                    |
|                        | Lecturer in Mathematics September 1988 – August 1990<br>Taught specialized courses for adults over thirty who needed to<br>geometry for work.   | elearn algebra and                            |
| Research<br>Experience | HARVARD UNIVERSITY<br>January 1993 – August 1994  | Cambridge, MA                                 |
|                        | Research Assistant: Dept. of Health Care Policy. Finding applications of Bayesian<br>Hierarchical Models in Health Care research. Under the direction of Professors Ca<br>Morris and Constantine Gatsonis   |   |
|                        | JOSLIN DIABETES CENTER<br>Summer 1989   | Boston, MA                                    |
|                        | Research Assistant/Statistical Consultant: Developed methods<br>longitudinal data sets to help determine the factors that trigger<br>those predisposed to the disease.  |   |
| Grants Received        | <ul> <li>Awarded Wharton School Sol C. Snider Entrepreneurial Control 1999, \$7000</li> <li>Awarded Wharton WEBI initiative grant, co P.I. with Profession Kahn to study build-to-order sites, \$7,000, 2000.</li> <li>Collaborator NIH Grant "Study of Pediatric Asthma", P. Health Care Outcomes Research Department, The Universitime, 2001-2003.</li> </ul> | essors Reibstein and<br>I Dr. Jeffrey Silber, |

| • "Research Advisor in Marketing": Development of Management Technologies to   |
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| Improve Productivity in Mass Consumption Supply Chains: the case of  |
| Supermarkets., P.I. – Professor Maximo Bosch, University of Chile, \$220,000, 2004-  |
| • Statistical and Marketing Consultant: USDA Meat Market Study, 2004-2008, \$4.3   |
| Million Dollars: P.I Professor Martin Asher and RTI International.   |
| • "Developing methods to tailor depression treatment to older adults", PI – Marsha Wittink, NIH Fund – 400-4312-4-552007-xxxx-2000-2932, \$475,000 |